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A TOMB CHAMBER IN THE SYRIAN ORPHANAGE, JERUSALEM

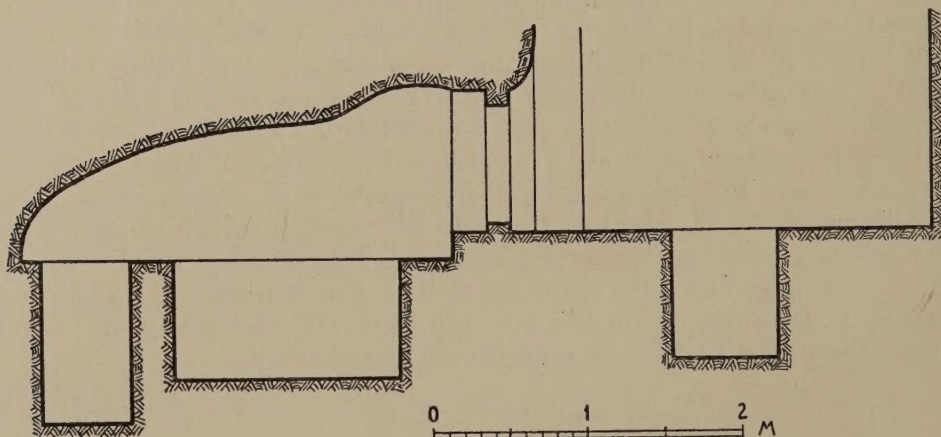
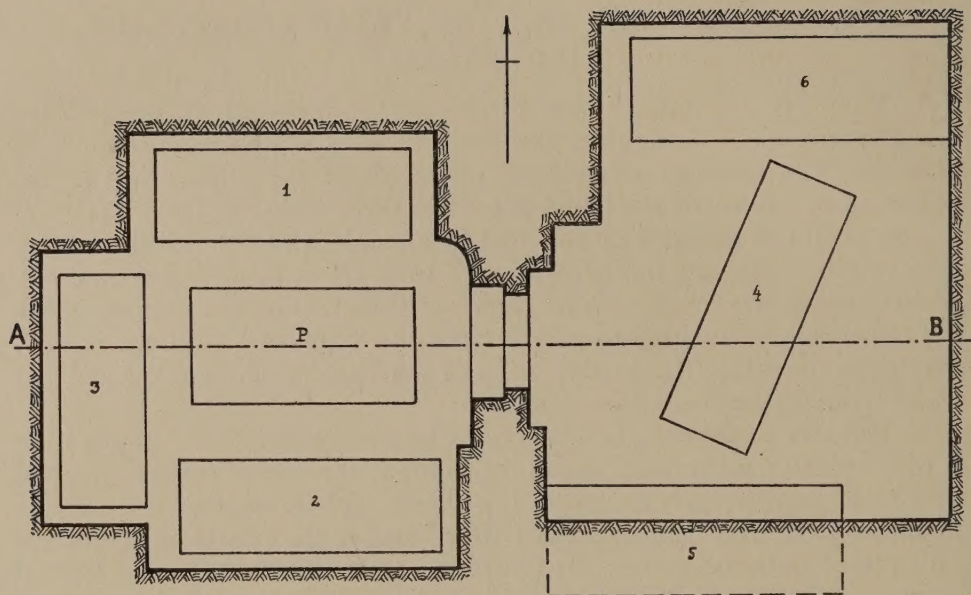
EARLY IN 1931 the Syrian Orphanage at Jerusalem reported to the Department of Antiquities the discovery of a tomb chamber on their grounds. The chamber was cleared on behalf of the Department in the beginning of March; it was found to contain three rock-sunk graves (Graves 1-3 on plan) and a central pit (marked P on plan). In front of it there was a rock-cutting containing three further rock-sunk graves (Graves 4-6 on plan).

The chamber was coated with two layers of plaster. The first coating, which was rather rough, consisted of grey cement and white lime grits, the second, which was smooth, of lime only. Most of the plaster had come off and was found lying on the floor of the chamber.

The entrance to the chamber was on the south-east (see plan). It was built of well-dressed masonry, and one of the stones to the west of the entrance had been bored to receive a latch. Several potsherds, with broad blunt ribs (usually attributed to the late Roman period), were found in the central pit and on the slabs placed over the graves. In Graves 1 and 2 several skulls and skeletal bones were found. In addition, a gold ear-ring with a suspended pearl bead (Plate XXXVIII, 2), similar to most of the ear-rings found at Karm al-Shaikh,¹ was found in Grave 1. This was shown to Professor Rostovtzeff, who regarded it as belonging to the second century A.D., basing his date upon similar ear-rings discovered in Egypt with papyri and coins of that period. Grave 2 contained a glass bracelet of 5.1 cm. diam. and a gold ear-ring with several pearls and a gem (Plate XXXVIII, 2). This form of ear-ring appears to Professor Rostovtzeff to be rather rare. No similar ear-ring is described in F. H. Marshall, *Catalogue of Jewellery* or E. Vernier, *Bijoux et Orfèvreries*. In the rebate of the grave a Roman lamp was found. In Grave 3 nothing but a few bones was found. The bottom of this grave was broken in the middle. An iron nail was discovered in Grave 6 (see plan) but nothing in the other two graves in the rock-cutting.

D. C. B.

¹ *The Quarterly of the Department of Antiquities*, Vol. I, No. 1, Pls. V (11), VI (7), VII (2, 9), VIII (3), XIV (3, 7).



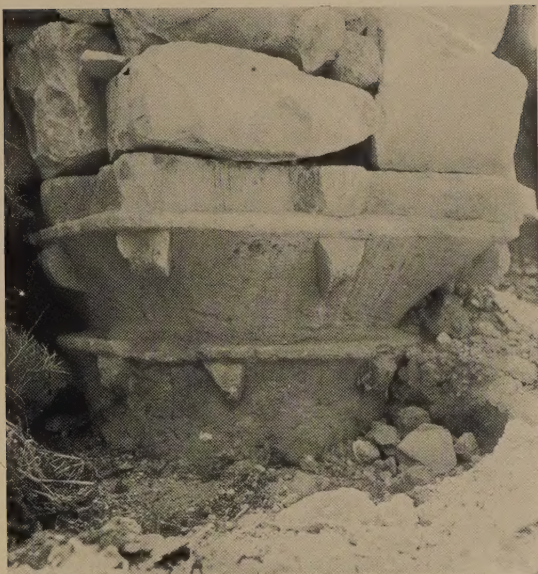


FIG. 1. CAPITAL FROM MUKHMĀS

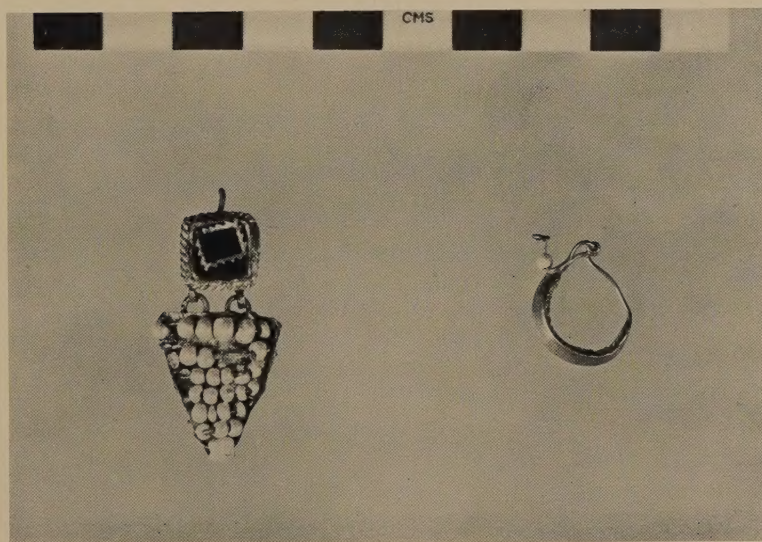


FIG. 2. FROM A TOMB CHAMBER IN THE SYRIAN ORPHANAGE

BYZANTINE CHURCH AT MUKHMĀS

MUKHMĀS is a small village situated on a ridge some four miles east of the Jerusalem-Ramallah road, three-quarters of an hour's walk from Er Rām.

That the village occupies the site of a Byzantine settlement is apparent from the masonry of which the present houses are to a large extent constructed. At the north end of the village a mosaic floor and some scattered architectural fragments mark the position of a church of the Byzantine period. Although various houses, walls, and a cistern have been constructed immediately on the site, the surviving area of mosaic in the yard of the northernmost house in the village is sufficiently extensive to show that we are concerned with an ordinary basilica divided by ranges of columns into three aisles, and orientated approximately east and west. The number of columns and dimensions of the building can no longer be judged, but irregular breaks in the mosaic indicate the position of three of those in the northern range: they are spaced at intervals of 2·40 m. from centre to centre.

The surviving floor, protected till now by a generous deposit of rubbish, belongs mostly to the central nave, but extends also into the northern aisle until it is interrupted by the foundations of the house. The mosaic consists of a plain diaper pattern of alternate black and red crosses, extending without variation over both nave and aisles, except that in the former it encloses two rectangular panels, lying 2 m. apart on the axis of the church. The easternmost of these contains an inscription in Greek, the other a circular design of interlacing bands inscribed in a simple guilloche (Pl. XXXIX, 1, 2).

The inscription is executed in red tesserae, averaging 1 cm. square, the letters being about 5 cm. high. It has been partly patched with coarse white tesserae. Restored it reads:

ΚΥΡΙΕ ΜΝΗCΘΗΘΙ ΤΟΝ
ΔΟΥΛΟΝ CΟΥ ΟΥΑΛΕΝΤΙ
ΝΟΝ ΑΜΑ CΥΝΒΙΩ ΚΕ ΤΕΚΝ
ΟΙC ΤΩ CΠΟΥΔΑCΑΝΤΙ ΓΕ
ΝΕCΘΕ ΚΕ ΨΗΦΩΘΗΝΕ ΤΗ
Ν ΟCΙΩΤΑΤΗΝ ΕΚΛΗCΙΑΝ

Line 1. μνήσθηθι for μνήσθητι.

Line 2. The name Ουαλεντινός appears in an inscription at Salkhad (Princeton Expedition to Syria 3, Sect. A, No. 168) and also at Dera'a (Waddington 2070 m).

Line 3. κέ, cf. line 5 ψηφωθήνε.

Line 4. τῷ σπουδάσαντι. The case is due apparently to assimilation to the preceding datives, συμβίῳ . . τεκνοῖς; it is without grammatical construction.

Line 6. ἐκλησίαν for ἐκκλησίαν not uncommonly.

'Lord, remember thy servant Valentinus, with his wife and children: who zealously promoted the building and decoration with mosaic of the most holy Church.'

The second panel, which probably marks the centre of the building, lies on a level with the more easterly of the inter-columnar spaces represented by the lacunae on the north side of the mosaic. For the design five different colours are used, blue-black, grey, red, pink, and yellow: these appear in different combinations with white in the three interlacing bands of which the central pattern is composed.

On the assumption that these panels lay on the central axis of the church, the width of the nave was 7·14 m. between the axes of the arcades. No other details of the plan survive. Two moulded column bases, differing somewhat from each other in size and design, lie in the courtyard, and these with two capitals, built respectively into a neighbouring house and cistern, and of a single pattern (Pl. XXXVIII, 1), are the only extant remains of the supports of the church. Some fragments of the chancel fittings—a screen post and a few broken table-legs of white marble—also decorate adjacent buildings.

The date and dedication of the church are unknown: it is possible that a second inscription, recording both, lay further to the east in the usual position before the chancel step; it has not, however, survived. The style of the mosaic and inscription suggests a date in the sixth century.

Mukhmās (Michmash) is mentioned by Burchard of Mount Zion, writing in 1283, as a fairly large town on the boundary of the tribe of Ephraim toward the south.

R. W. H.

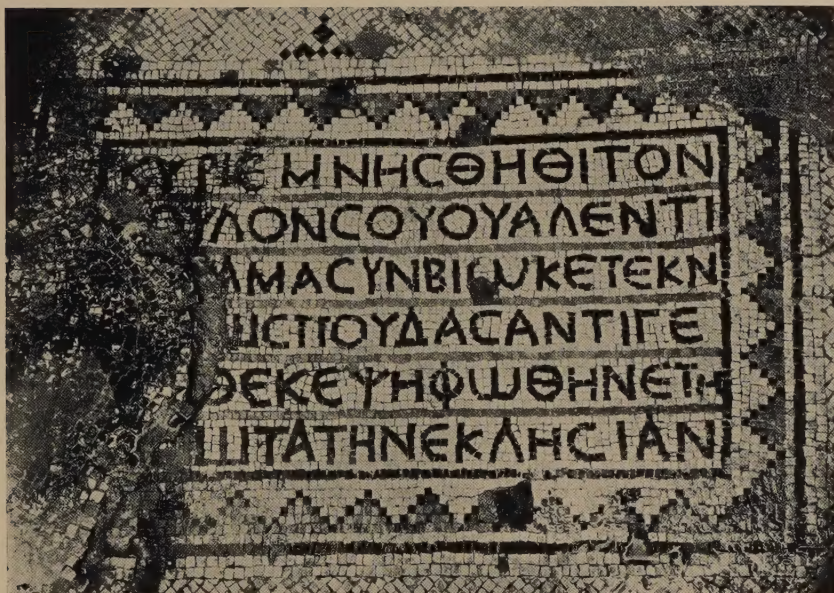


FIG. 1



FIG. 2

TESSELLATED PAVEMENT AT MUKHMĀS

STREET LEVELS IN THE TYROPOEON VALLEY

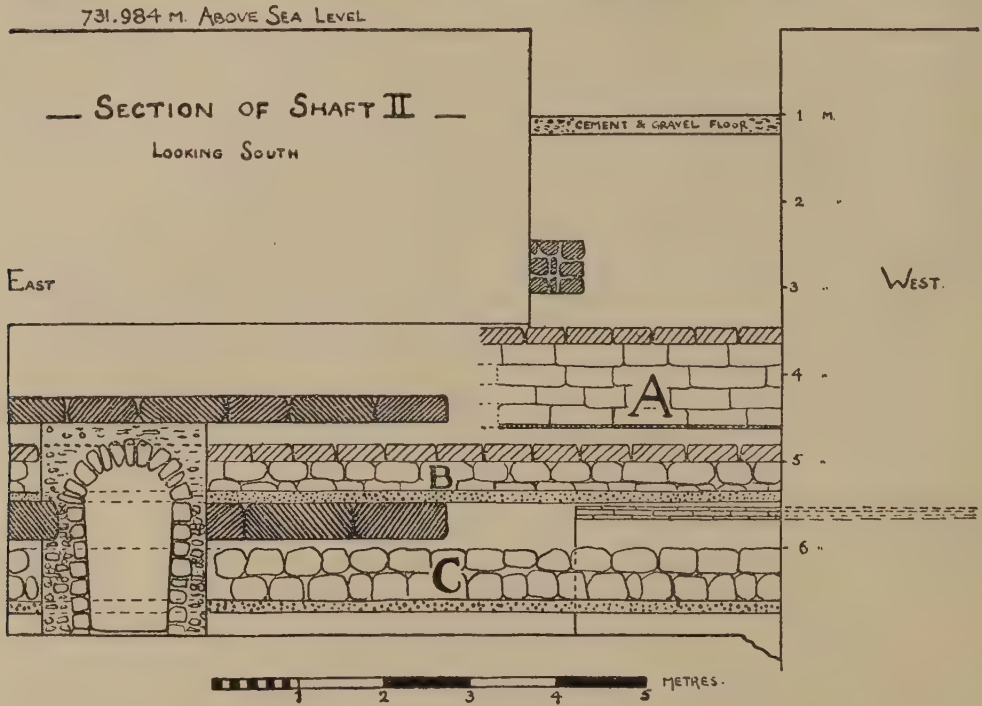
THE previous account of the operations in the Ṭarīq el Wād described the excavation of the first of two pump shafts sunk on the line of the main sewer with the object of diverting the flow of sewage from that section of the drain whose reconstruction the Municipality has undertaken. The lower of these, Shaft III, restores the stream to its old course at a point some few metres south of David Street, the total distance between the two being 87.5 metres. An intermediate shaft, No. II, has now been sunk 20 metres to the south of Shaft I, and 5 metres west of the line of the sewer and modern street.

This excavation, which was to be the base of the actual repairing operations, was carried down 7 metres below the surface level. It cut through a series of different periods of construction beneath the modern houses, including at 1 metre a cement and gravel floor covering the whole area of the shaft (see Sections), at 2.45 m. the foundation of a wall bordering the north and east sides of the shaft, and below this a series of three successive drainage or water channels, flowing in each case from west to east, and occupying roughly the same line along the north side of the excavation.

From the bottom of the shaft a lateral tunnel was driven eastwards to give access to the sewer, which from this point southward to Shaft III was to be dismantled and replaced by a reinforced concrete tunnel. Here too, as in Shaft I, two street levels were encountered, and so far as the demolition of the sewer has hitherto proceeded they accompany it. The difference in level between the two pavements is here considerably less than in Shaft I, where they were divided by a layer of debris 1.70 m. in depth. From there the upper pavement and arch of the sewer have descended 0.65 m., while the lower, remaining constant in level or even rising slightly, leaves an interval of barely a metre between the two.

In the course of the excavation along the line of the sewer itself, which has hitherto been confined to the section south of Shaft II, some new facts as to its construction and relation to the pavements have appeared. It is now clear, for instance, that the present structure incorporates two distinct periods of work. All that part of the drain which is below the level of the lower pavement is built of solid rubble set in good lime mortar and faced internally with rough blocks varying from 20 to 30 cm. in height. The upper part, on the other hand, comprising mainly the backing of the vault, is of a much looser rubble, set not in mortar but in mud with a very small proportion of lime.

This difference in the quality of the upper and lower sections continues unmistakable throughout the length that has so far been demolished, and at the same time corresponds with the level of the lower pavement—a coincidence which strongly suggests that the lower and better-built part of the drain is contemporary with that pavement and was not, as at first seemed possible,



sunk below it subsequent to its disuse. This is confirmed by the fact that the lower pavement shows no sign in the neighbourhood of Shaft II of having been ripped up about the line of the drain, but on the contrary abuts immediately upon it throughout and in parts is even built into the fabric. Had the street been torn up subsequently to allow for the excavation of the sewer, a considerable hiatus would of course have been left between the two broken edges and the sides of the intrusive structure.

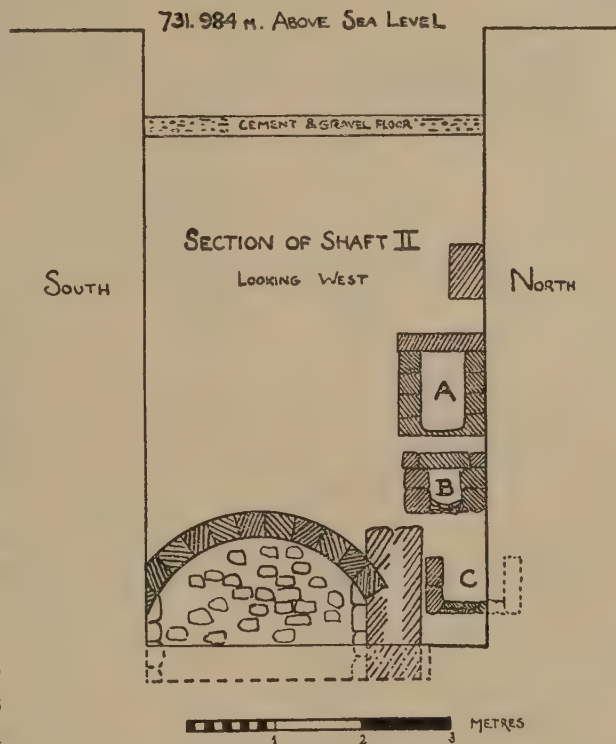
It is equally certain that the sewer in its present form is contemporary with the upper of the two ancient streets, with which it is connected at intervals by manholes carefully constructed in the apex of the vault.

There is, however, a change in the structure of the sewer between Shafts II

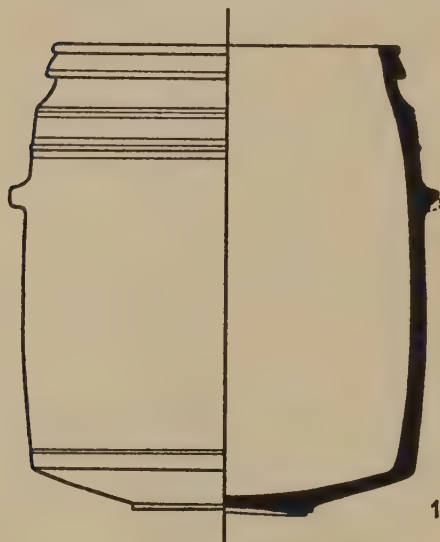
and III. The latter was excavated directly over the line of the drain and here too the upper pavement was found to continue, its stones lying, as in I and II, diagonally to the axis of the street, the level 70 cm. lower than in Shaft II. The sewer, which is here only 70 cm. wide, is covered no longer by a vaulted roof but by flat slabs which are separated from the upper pavement by 30 cm. of earth. The continuation of the lower street up to this point has not yet been verified, as the diverted stream was discharged straight into the top of the drain without further excavation.

Returning to the three channels (marked A, B, and C in the sections) which were encountered in Shaft II, it will be seen that both B and C, instead of flowing into the main sewer and there ending, are in fact interrupted by its unbroken wall and continue their course on the other side. Both these channels, which were fairly well built, the sides consisting of two courses of stones, the floors of brick rendered with cement, appear from the

clayey deposit that fills them to have been water conduits rather than drains. The upper one was roofed with heavy slabs. The gradient of these channels could not be ascertained: they are represented as level on the section, but doubtless flow with the slope of the ground toward the east. It is apparent that C is the earliest structure we have and that it had already fallen out of use when the lower street was laid. At least two other similar conduits, intercepted by the sewer, have been noticed in the course of the demolition toward the south; these in each case flow eastwards and are filled with pure clay. It would seem likely that they are all tributaries of an earlier main channel perhaps following



the centre of the valley. B similarly antedates the upper pavement but belongs to a period when the lower one had a 60-70 cm. covering of debris upon it, and the big channel was entirely choked up. The upper pavement, with the recommissioning of the old channel in its present form as a sewer, represents a fourth stage. The relation to this street of A, the best constructed of the side



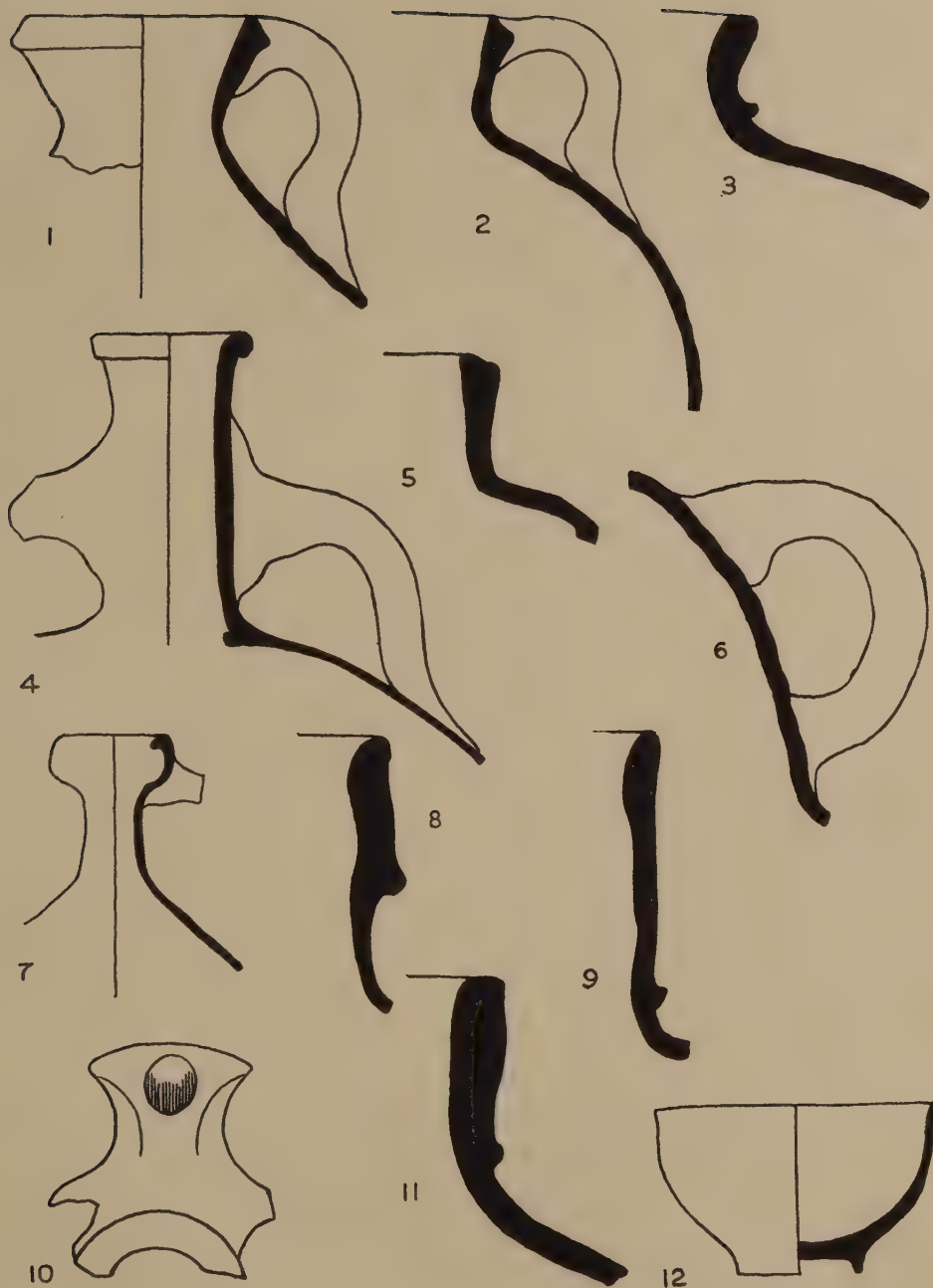
channels, with heavy stones and plaster rendering, is somewhat uncertain: its abrupt termination before reaching the edge of the pavement would suggest an earlier date, the level a later. If however, as is most probable, the street was bordered on either side by a raised colonnade or walk, the higher level and fine covering blocks of the drain may be connected with this. The destination of its contents cannot be determined on the evidence. The Madaba map represents a main thoroughfare on the line of this street, with a colonnade on the eastern side.

The objects found in the shaft and subsequent excavations include the base of a column at 3.70 m. from the

surface and at 4.50 m. a stone jar with moulded rim (see drawing), which was found surrounded by bricks at a point 1 metre to the south of A in the shaft. A fragment of column was found lying on the upper pavement: this, with the base already mentioned, is the only indication of the colonnade represented in the Madaba map.

At the bottom of the shaft and projecting 2 metres from its western side the end of a well-built vault was encountered: it is built of the stone known as mizzeh helu, treated with a comb-pick. The axis of the vault lies west to east; it rests upon side walls of a much rougher construction which clearly antedate it, strengthened at a point 1.50 m. west of the edge of the shaft by internal buttresses. All that part of the vault which projected into the shaft had to be destroyed, but a section of it, blocked after 2.40 m. by a rubble and cement wall, can still be seen outside the limits of the shaft. It is hoped that this vault will be further excavated at a later date.

In assigning dates to the two streets, the notable quantity of accumulated debris between them and the filling up of the central channel require us to



postulate a considerable period of partial disuse, terminated at each end by a period in which this was a populous and important thoroughfare. To assign the lower level to the Herodian city and the upper to the early Byzantine period is a hypothesis not contradicted by the evidence of the potsherds. To satisfy the conditions we should expect to find below the upper pavement no sherds later than the Byzantine period and below the lower none later than the first century. Accidental circumstances such as the breaking up of the lower pavement in Shaft I may account for some exceptions. The drawings on p. 109 represent the most typical rims and handles found below the second pavement—Nos. 8, 9, 11 from Shaft I, the rest from Shaft II. The commonest are a hard red ware, faintly ribbed (1, 2, 5) and a pink ware with cream external slip (3, 4, 6, 8). The types between the two levels do not differ greatly but include a number of definitely Byzantine ribbed fragments and two sherds with a comb decoration. The pottery above the upper level in both shafts presents an indiscriminate mixture of medieval and modern fragments. Of the coins that were discovered in the shafts only two are identifiable; both come from Shaft II: they cannot be used with certainty to date the pavements, as they were found in the shaft itself, and not directly above or below either street. The first, from 4 metres, is a bronze coin of the First Jewish Revolt, second year (i.e. A.D. 67–8), with the amphora on the obverse and vine leaf on the reverse side. The second, also a bronze coin, was 7 metres deep. It dates from the reign of Antiochus VII, 138–129 B.C. Obverse is a lily, reverse an anchor with single cross-bar (cf. *B.M. Catalogue of Greek Coins*—Seleucid Kings of Syria, Plate XX, No. 14, and page 75, No. 69). The mint is Jerusalem. A small bronze bowl (No. 12) and a fragment of the rim of a stone jar similar to that already referred to, both found below the second level in Shaft II, complete the list of objects found.

R. W. H.

EXCAVATIONS AT PILGRIMS' CASTLE ('ATLIT)

The Faubourg and its Defences.

PILGRIMS' CASTLE¹ at 'Atlit belongs to the closing phase of the Crusading occupation of Palestine and Syria. Early in the thirteenth century the Latins regained a precarious safe-conduct to the Holy Places, but apart from a few inland fortresses their effective hold was limited to a chain of sea-ports. 'Atlit was their only permanent foothold 'between Cayphas (Haifa) and Caesarea in the diocese of Caesarea';² built, as the chronicler suggests, in order to check the enemy's forays from Mount Tabor, some thirty miles east. Together with Caesarea it formed the first-fruits of the Austro-Hungarian crusade which afterwards spent its strength at Damietta; and it got its name because the 'pilgrims' of this crusade helped the military orders to begin building it. At *castrum filii Dei*, otherwise *Castellum Peregrinorum* or *Chastel Pelerin*, the fleet gathered in 1218. After Damietta the Temple took it over, since they already held a police post close by at a defile on the coast road called *Districtum* or *le Destroit*.³ In the Bishop of Acre's opinion not least of the advantages of the new garrison was that the Order was released from the sin and corruption of Acre for the recovery of Jerusalem; while at the same time it could do the Saracens the greatest possible injury from the new castle, driving them from their positions in fear of the wrath of God.⁴ In Templar hands it became one of the finest of the Latin castles. In 1229 it easily defied the 'grant malice, grant treason' of the Emperor Frederick II,⁵ and in the war of attrition in which the Mamluk sultans finally expelled the Latins it was never besieged and scarcely threatened, although at the last it could not resist independently when Acre fell in 1291. Primarily a *point d'appui*, it was also a stage on the road to the Holy City; between Acre and Jerusalem 'the sons of Agar' had no rival stronghold. Perhaps like Acre it was also a port of entry for pilgrims, whom the Templars escorted inland. It lay in well-watered

¹ As late as the middle of the last century it was always known to travellers by this name, usually in the form Castle Pellegrino; cf. Alderson, *Notes on Acre* (London, 1844), p. 37, and earlier references given by Enlart, *Monuments des Croisés* (Paris, 1928), texte II, 93 ff.

² The building of the castle is described in some detail by Jacques de Vitri, 'Historia Orientalis,' III, *sub anno* 1217, in *Gesta Dei per Francos*, ed. Bongars (Hanover, 1611), I, 1131. It is also referred to in *L'Estoire de Eracles, Recueil des Historiens des Croisades, Occidentaux*, II, 325 (A), 332 (B, C, D); cf. *Survey of Western Palestine, Memoirs*, I, 293.

³ Now Khirbat Dustrey.

⁴ Jacques de Vitri, l.c.

⁵ *Eracles*, 373 (C), 374 (B).

country, says the chronicler, well stocked with fish, salt-pans, charcoal, pasture, and grass; vineyards, orchards, and gardens delighted its inhabitants.¹ It is not surprising that around the harbours beside the castle a town grew up which was important enough to have its Count of Burgesses.² The outer fortifications enclosing this lower town or *faubourg* have formed the principal object of excavations carried out by this Department over a period of six months at intervals between May 1930 and May 1931.

The chronicler justly observed that it had a fine natural position, which art could improve upon.³ The castle proper stands on a rock peninsula heavily fortified at the neck, whence beaches run east and south (Plate XL). The southern is a bay, partly land-locked, enclosing a shallow but sheltered anchorage. Under this beach runs the back of the rocky ridge at the seaward end of which the castle was built. To the east lay a marsh thickly overgrown with tamarisks, originally an inlet of the sea, which has recently been drained to make salt-pans. Dictated by these natural features, the main extension of the town was southwards, reaching as far as the tip of the exposed part of the ridge, a kilometre SSE. of the castle, the nearest position for a watch-tower (Plate XL, 1). Here a fort was built which became the south-eastern corner of a long rectangle, roughly 600 by 200 metres, bounded on the north and west by the beaches, on the east and south by a land-wall and fosse. Of the links so enclosed about 22 acres (9 hectares) were habitable, since they lay above the storm-level, and this area, roughly three times as large as the castle, was closely built over. Large mounds of blown sand overgrown with shrubs disclose the position of several of the more important buildings. One at least still stands roof-high (Plate XL, A). Before work began this too was mostly hidden by sand; the corner fort had the appearance of a green hill; and the masonry of the outer wall was visible only in places.

The town had four approaches, three of them in the longer eastern side. Along the north beach ran the main road from the north, turning off the coast road near an earlier Templar *casal* or fort, at the 'Narrow Ways', the *Districtum* or *Destroit* already referred to, a kilometre east of the castle. This had been established here 'on account of the robbers who ambushed the crusaders in the narrow defile as they were going up to Jerusalem or coming back'.⁴ Here King Baldwin I had been set upon and badly wounded as far back as 1103.⁵ Richard the Lion Heart passed two nights at the *casal* on his

¹ Jacques de Vitri, l.c.

² *Assises de Jérusalem*, quoted by Enlart, l.c.

³ Jacques de Vitri, l.c.

⁴ Ibid.

⁵ William of Tyre, X, 26, where it is also called 'Petra incisa juxta antiquam Tyrum (et Tira) inter Capharnaum et Dora (Tantura) oppida maritima'.

march from Acre to Jaffa in 1191, his army camping on the beaches and re-victualling from the ships.¹ The wadi and the ruins of the fort still keep their Frankish name in an Arabic form, Dustrey.² The wadi and the marshes, both inlets of the sea, forced the road inland at this point, and the older name, *Petra incisa*, suggests that it was in some ancient quarry that the robbers hid, possibly in the cutting which is still the principal approach to the castle. With the building of the castle the fort at Wādī Dustrey became its northern outpost. Towards the centre of the eastern side of the town a causeway crossed the marsh in a direct line with the gate-tower at the south-eastern angle of the castle. A third way from the south-east, now the station footpath, is marked by deep wheel-ruts in the western slope of the southerly ridge (Plate XLI, 1). These three were evidently the routes by which stone was brought in from the old quarries along the high ridge inland to the east of the railway (*Maqṭi'at 'Atlit*), the site which is now being intensively worked by the Haifa Harbour Works Department. Southwards the main road passed along the sea-shore just under the south-eastern fort (Plate XL, M), rejoining the coast road a mile or so south of the 'Narrow Ways', and proceeding thence to Caesarea, Jaffa, and Jerusalem. Thus both arms of the detour from the coast road were watched by outposts, each about a kilometre from the castle and within sight of it.

Though similar in plan to Khirbat Dustrey, the south-eastern fort (Fig. 1) was a later construction. The chronicles do not mention it as being already in existence when the castle was begun: indeed before the detour was made it could serve no useful purpose. On the other hand there are indications that it preceded the land-wall and therefore the development of the town. Presumably it was built as a southern outpost at the same time as the castle and later incorporated in the wall enclosing the town. It centred round a guard-tower built upon the last hump of the ridge. To give it relief and command it was isolated from the ridge by a rock-hewn fosse on the east and south (Plates XLI, 2, XLVI, 1). On the east this is deeper than on the south, but neither arm was carried right up to the corner, which is one or two steps higher, and neither arm was deep enough to admit the sea. Away from the ridge on the west and north, the hill was terraced to take an upper and lower range of barracks and stables (Figs. 2, 3). The upper terrace did not involve much levelling, but the lower was hewn out of the hill-side with a good deal of ingenuity and economy, entailing the minimum of building and providing the maximum of building stone. Both the long walls of the lower room on the north were scarped

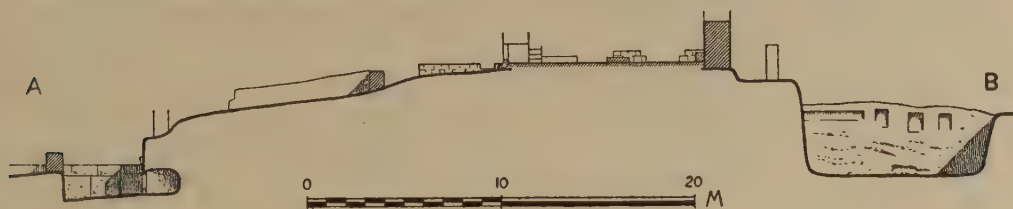
¹ 'ad oppidum Capharnaum . . . usque ad Casam dictam Angustarum Viarum,' *Itinerarium Regis Ricardi*, IV, 12, 13, ed. Stubbs, Rolls Series (London 1864), 253-4.

² The visible ruins have been described in the *Survey of Western Palestine, Memoirs*, I, 309-10.



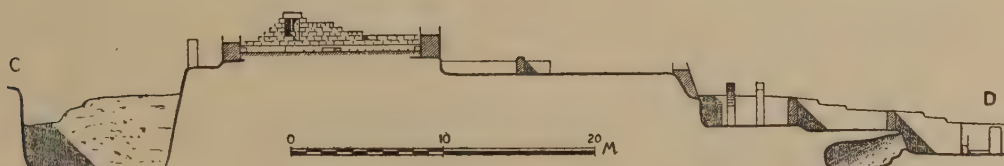
FIG. 1. Plan of the south-eastern fort, (L) on Pl. XL.

rock; on the west, where the height of the rock was insufficient to make an outer wall, aisles were formed by arches springing from reserved rock piers (Fig. 4, Plate XLII, 1). These arcades and the transverse arches on the north (1, 2) or along the south wall (12) were placed close together on account



MEAN SEA LEVEL

FIG. 2



MEAN SEA LEVEL

FIG. 3

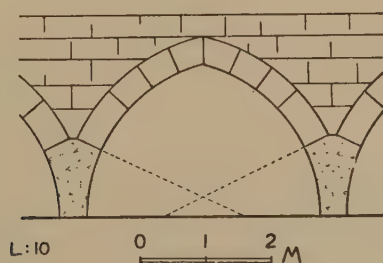


FIG. 4

of the local shortage of long timber. Elsewhere as at (5), (7), (8) (Fig. 1) caves or ancient tombs were enlarged by scarping and extended with vaulted porches of cut-stone. Inside the rooms cupboards were hewn wherever possible in the rock walls (Plate XLII, 2). An unfinished set on the north side of (1) shows very clearly the method of quarrying followed before the intro-

duction of gunpowder. The intended position of each cupboard is marked by three vertical grooves partly hewn to a depth of several centimetres before being abandoned. These divided the doorspace into two blocks. Normally, as in the castle quarries, they seem to have been sunk as far as the pick would go before the wooden wedges were driven home and swollen with water to split the blocks off.

The fact that one of the largest of these cupboards, the one at the east end of (1), was blocked by the town wall suggests that the rock-cutting came first. On the other hand there can be little doubt that all the cutting was of one plan with the tower. In the lower western rooms (6, 9, 10) piers were carefully reserved for broken arches (Fig. 4); while both here and in the fosse older tomb-shafts of the Persian period were ruthlessly cut through to conform with the plan. Deep down in some of the shafts which have been examined Crusader coins and other objects have been found; notably in the two which underlay the wall of the tower at (14) and (20), obliging the disgusted architect to span them with arches (Figs. 1, 5, and Plate XLIII, 1, 2). Most, though not all, of the walls were also part of this rock-cut plan. Only the tower (15) and guard-room (20), the two rooms at the north-western corner of the upper terrace (19) and (24), the vault over (8), and the western retaining wall were of ashlar with the distinctive diagonal chisel-dressing of the Crusaders. In these rooms only have Crusader coins or other objects been picked up. The remaining party walls on the terrace, which would have interrupted the command of the tower, appear to be the hasty work of squatters, cabins for themselves and pounds for their goats. They are indifferent buildings, of re-used stones set in mud and wedged with chips. The walls of the lower rooms (1-7, 9-12), however, and of the courtyards to the west, which consist of quarry waste including great slabs of rock set on end, do seem to belong to the original plan.

After eliminating the secondary walls on the upper terrace the general plan becomes fairly clear (Fig. 1). Starting between (5) and (6) a rock ramp ascended to the upper level, turning left and then right on the other side of the building at the north-west corner. At the opposite corner of an open yard stood the tower, the door facing towards the yard (Fig. 5). At right angles with this door was another, opening into a guard-room which led out to the sentry-walk running round the two outer faces of the tower. Against the south face the sentry-walk was found to be encumbered with a strong packing of stones and mud which blocked the windows (Pl. XLI, 2, after clearing); but originally it was protected by a parapet, the line of which is still marked by mortar and indicated in the photograph by a stack of vaulting-stones recently removed from the tower. The stones of the original parapet lie at the bottom of the

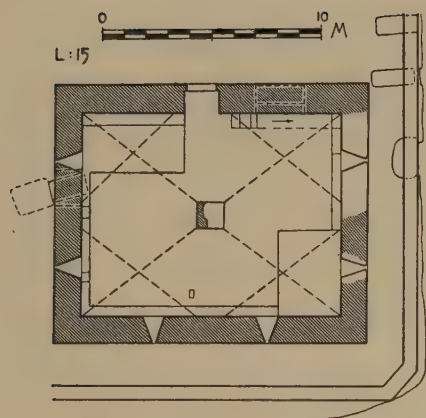


FIG. 5

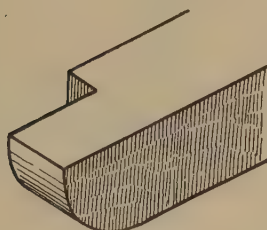


FIG. 7

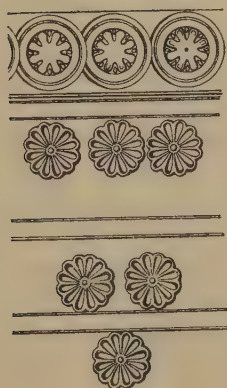


FIG. 9



FIG. 6

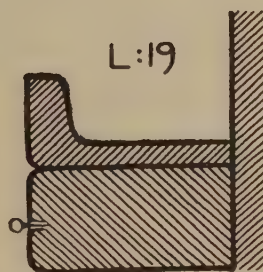


FIG. 8

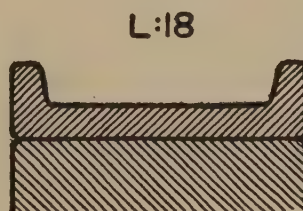


FIG. 10

fosse. Like the stones of the town wall they are quarry-faced with tooled margins;¹ but unlike them they have clean backs and mortises for dowels (15-20 cms. each way), near the ends of the bedding face. They are sufficient for one course 90 cms. high; above, there may have been a screen of smaller ashlar. Assuming that the height of the parapet was the height of a man there would still have been a free command from the arrow-slits of the tower. There were two each of these in the western and southern faces and presumably in the ruined eastern face as well (Fig. 6). The northern had no arrow-slits but the door may have been protected by a *machicoulis* to which a corbel found in the tower belonged (Fig. 7). One of the slits on the south side still stands to its original height (Pls. XLI, 2, XLIV, 1). Inside a bench ran under the window-slits to serve as a firing-step. Against the western half of the blind north wall there was a *diwan* for sleeping (Pl. XLIII, 2); in the opposite corner there may have been another, beside it a sink of which the earthenware drain has been found (Pl. XLIV, 2). East of the door and so masking the low arch which spanned an awkward tomb-shaft in (20), a staircase ascended to the roof or an upper story. In the middle of the floor the outline of a square central pillar can be traced by means of the remaining stones and plaster edge. This divided the tower into four bays, each covered by an intersecting vault. The vaulting stones were flat and square, averaging $40 \times 30 \times 15$ cm., of coarsely laminated limestone from the fosse, a light and suitable material on account of the sand filling between the laminations. Many of them had been used for the floor and party walls of a peasant house built upon the ruins of the tower, dividing the latter into three or more rooms.

At the north-west corner of the yard were stables (19, 24); the outer room (19) had two stone troughs or mangers rendered with plaster, each long enough to take three or four horses (Fig. 8, Pl. XLV, 1). Near the floor these had iron rings fixed in leaden tubes and placed irregularly 25, 50 cm., or a metre apart, possibly intended for hobbling. A large water jar was found here, stamped with rosettes on the shoulder (Fig. 9); in shape it probably resembled two found elsewhere on the site (Pl. XLIV, 3, 4). The trough in the neighbouring yard (18) was shallower (Fig. 10) and was placed as high as a metre from the floor; together with the stone water butts (Fig. 11) it may have served for either watering horses or washing harness. The camp kitchen lay against the tower in (14), where there are rock trenches some 30 cm. deep containing remains of charcoal which can hardly be explained otherwise. The water supply was handy, a rain-water cistern (22) between the tower and the stables with a capacity of 60 or 70 cubic metres. It was rectangular in plan, rock

¹ p. 122.

hewn and vaulted from reserved rock arches (Fig. 12). The bottom was graded to a central sump. The faces were rendered in hard pink plaster containing ground pottery and fixed to the rock with sherds. Its catchment was the stable roof, which would normally have been more than sufficient to fill it. From a corbel found in (24) (Pl. XLV, 2) this roof appears to have been

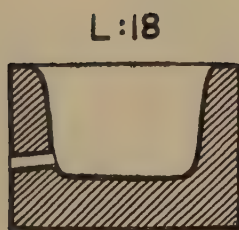


FIG. 11

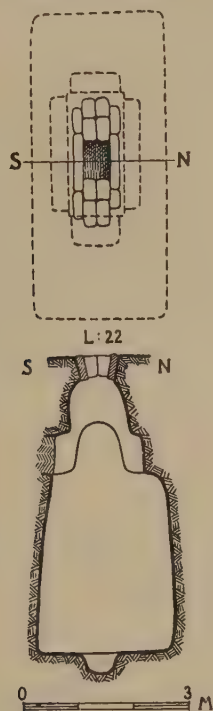


FIG. 12



FIG. 13

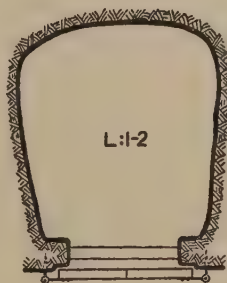


FIG. 14

timbered. From the roof the rain ran down an earthenware pipe into a covered stone butt, which was provided with a sump plug, and was led off to the cistern by a plastered rock channel covered with flat stones (Fig. 13). Not all the animals can have been stabled or even watered on the upper terrace; of the lower range (9) and (10) were also stables, since the yards in front of them were carefully drained, while in front of (7) there is a well of good spring water practically free from salt. The rock-cut cupboards in (9) were not mangers but perhaps held forage rations. In (1) and (2) they were fitted with doors (Fig. 14, Pl. XLII, 2) suggesting that these two rooms at least were barracks. Coins, probably lost during the building, were found in most of

these rooms; they are chiefly of Hugh I of Cyprus, who died in 1217, the year the castle was commenced. A more personal document came from (8), a cellar hewn under the north wall of the tower (15) through an ancient tomb-shaft. It is the seal belonging to a member of one of the military orders, a Frenchman, most likely of the Temple. The matrix is of brass (Pl. XLV, 3) and bears the legend S'. FRERE: SIMON D'. GVINECORT for 'Seal of Friar Simon de Guinecort', around a shield 'lozengy per chief indented of four indentures' (Pl. XLV, 4, 5).

When the town grew big enough to need defending the corner fort was taken as the starting-point of the wall and fosse (Pls. XL, B, B, B, and XLVI, 1, 2). Thence they ran north and west to the beaches, where the wall terminated in towers (F, N) built far enough into the sea to make it difficult for an enemy to wade round (Pl. L, 1). Neither arm was quite straight: there were slight bends at the gates (C, E, M), which had to be placed wherever a suitable rock foundation could be found, and another near the north end at (D), where the half-drum tower of a guard-room flanked the angle (Fig. 15). At the corner the wall ascended the escarps by steps, curving slightly towards the parapet in front of the tower. Throughout it was accompanied by a fosse which kept an even width of 10 metres, equal to the rock-cut portion under the fort. West and north of this the counterscarp was a dry-stone retaining wall, which can be traced for a 100 metres or more either way (Pl. XLVII, 1). For the greater part of its length it was dry, but at the ends, where the rock floor slopes below sea-level, the sea may formerly have washed in.¹ The wall itself, like the castle, has suffered considerably from quarrying. Locally it is common knowledge that the early nineteenth-century pashas of Acre, Jazzar and his successors, took stone from here to build their mosques and khans at Acre;² Ibrahim Pasha similarly repaired the ramparts.³ In sheltered parts, where there was no great accumulation of blown sand against it, or near the western shore, the wall has been pulled down to the third or second course; where it was exposed to drifting sand and covered to a greater height it is better preserved and still stands five or six courses high above the rock or footings (Pl. XLVII, 2). The mortar shows that there was a seventh; just north of (A) ten stones belonging to this course have heeled over in a row owing to some powerful shock, either earthquake or explosion. As the coursing is

¹ Against the east side the water level has been raised over two metres by the salt pans of the Palestine Salt Company; but before these works there was 'water in places', *Survey of Western Palestine, Memoirs*, I. 294.

² Rustum, *Acre and its Defences under Ibrahim Pasha* (Beirut, 1926), p. 7.

³ Mentioned in report on the fortifications by Lt.-Col. Alderson, R.E., entitled 'Notes on Acre' (London, 1844), p. 37.

uniformly 75 cm. the wall must have had a relief of not less than 5.25 m. (16 ft. 6 in.) and a command of 3 to 4 metres (10 to 13 ft.). One side of the south gate (M) still stands to this height (Pl. XLIX, 2); of the other gates, (C, E) have been pulled down to the second or last course above the threshold

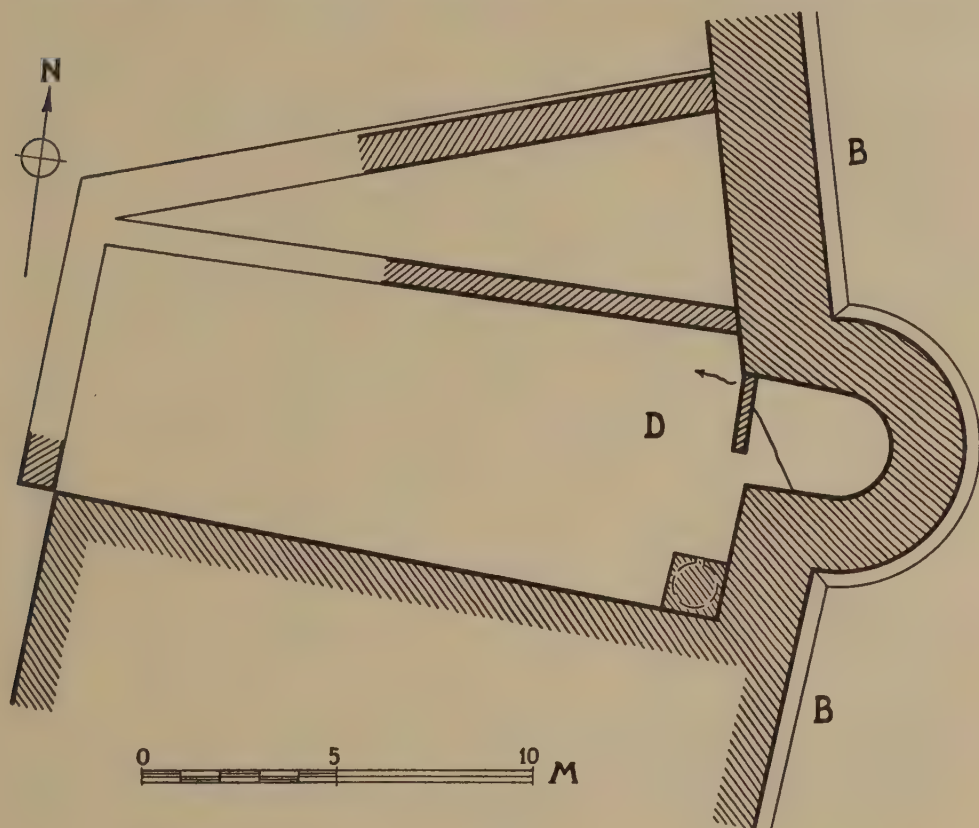


FIG. 15

(Pl. XLVIII. 1, 2); (H) stands a little higher because the threshold is lower than elsewhere (Pl. XLIX. 1).

Though not a major fortification, for it is not regularly flanked as a bailey wall would have been, the town wall was meant to be more than a barrier against sudden bedouin raids. Like the castle, it was heavily constructed of sandy limestone blocks averaging more than a ton in weight; as the chronicler says of those used in the castle, 'two oxen could scarcely draw them'.¹ Following the

¹ Jacques de Vitri, l.c.

older labour-saving tradition of the country the stones were quarry-faced, drafted at the edges only, but truly bedded. A thick spread of lime mortar mixed with sand and shells was used between the courses, and occasionally chips as wedges. Its width varies between 2.30 and 2.60 m., but is usually 2.55 m.; the facing stones penetrate from 0.60 to 1.0 m., and the interval was filled in with a concrete of lime and waste (cf. Pl. L, 2). The gates were similarly constructed; in plan they differ somewhat. The three main gates (C, E, M) were placed at some depth between returns of the wall, inward at (C) (Fig. 16) and (E) (Fig. 17), outward at (M) (Fig. 18); at (E) in order that the door could be enfiladed from arrow-slits just in front of it, while (C) and (M) may have been similarly protected by *machicoulis*, though they are both too ruined to show any direct evidence of it, or even of a vault. But presumably these gates were vaulted, since they each had a portcullis in front of swing doors, both indicated by timbers in a photograph of (M) (Pl. XLIX, 2), with possibly another *machicoulis* in between.¹ The doors of (M) were closed by a draw-bar resting not against the door, it appears, but against a second bar (*barre à fléau*) pivoting on the centre of one leaf of the door;² (C) may have had a similar locking arrangement. The small foot-gate (H) (Fig. 19) was locked by two draw-bars running in the thickness of the wall (Pl. XLIX, 1). At (E) where the flanks were not wide enough to take the socket of a draw-bar, a pivoting bar may have been used. From skewbacks lying amongst the debris both (E) and (H) appear to have been arched. Of the four gates only one, the foot-gate at (H), was approached from the floor of the fosse (Pl. XLIX, 1); (C) and (M), and presumably (E) as well, were connected with the counterscarp by bridges. Since (M) projected half-way across the fosse a single rest was sufficient to carry the transoms over the remaining 5½ metres; this short timber bridge could have been removed or destroyed in case of attack, though there are no sockets to show that it was a rising drawbridge. At (C), from the fragment of building which projects from the wall, the road seems to have been extended some way across the fosse to take a similar timber bridge which could be withdrawn or raised. North of (E) were two guard-rooms built of light rubble, in which were found fragments of two large water-jars sufficient to permit reconstruction (Pl. XLIV, 3, 4); one (4) has a band of combing on the shoulder covered with green glaze, the other (3) the stamps shown in Fig. 20, which the potter attempted to combine in a zigzag diaper.

¹ Compare the twelfth-century gate of Carcassonne described by Viollet-le-Duc, *Dict. Raisonné de l'Architecture Française*, s.v. *Porte*, VII. 317.

² An instance from Carcassonne is given by Viollet-le-Duc, op. cit., s.v. *Barrière*, II. 122.

At either end of the wall were sea-towers (F, N). They have suffered less at the hand of man than from erosion by the sea. Of the one on the western beach, which is exposed to south-westerly gales, no more than one course remains on



FIG. 16, Gate (c)

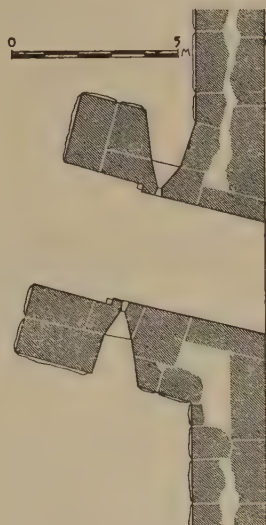


FIG. 17, Gate (E)

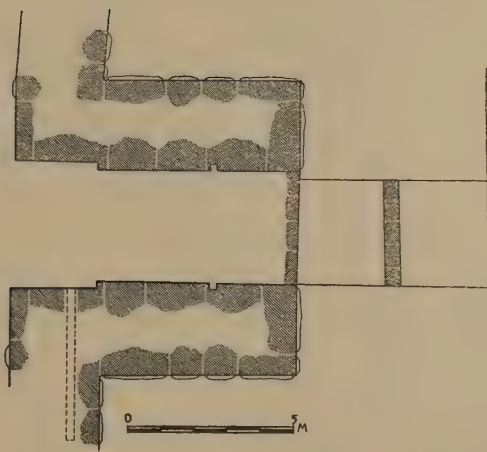


FIG. 18, Gate (M)

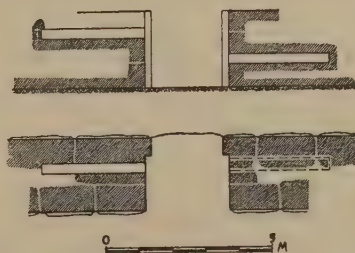


FIG. 19, Gate (H)

the footings, despite the fact that the lower courses were of stones weighing two tons or more tied with iron dowels. Of the north sea-tower (F), however, a good deal still stands (Pl. L, 1, 2), although the west side was so much undermined that underpinning has been necessary. The plan (Fig. 21) is on

the floor level, some two metres above the water. The tower had a vaulted roof reached by the staircase against the door. There were two windows in the east side,¹ and apparently one in the west. The outer walls were of ashlar in courses of 75 cm., diminishing higher up; the lowest three had a batter of 1 in 6, which was continued along the wall (Pl. L, 2) connecting the tower with the guard-room at (D) (Fig. 15). This room appears to have been contemporary with the drum-tower and the town wall; the walls run square with

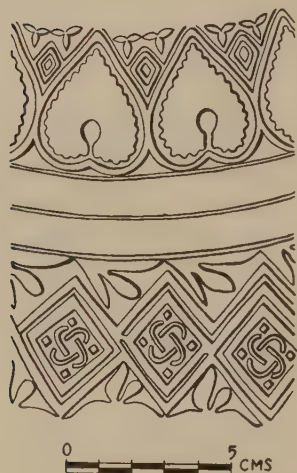


FIG. 20

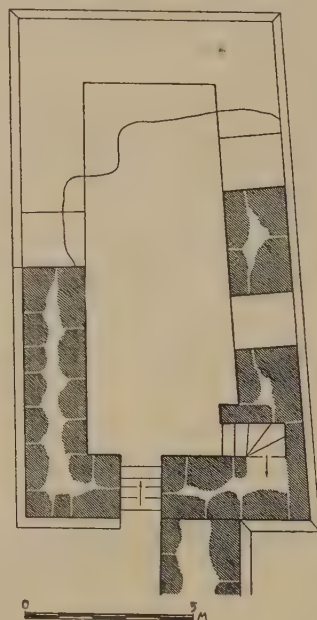


FIG. 21

the arms of the town wall on either side of the tower; the seaward wall has a batter and they are all of ashlar dressed crosswise with a chisel as in the corner tower (L). Crusader coins were found on the floor. The oven was brick-built and domed, resembling the smaller one (Fig. 27) in (A), room 10 (Fig. 22). The room is part of a larger building extending southwards under a Moslem cemetery that cannot be disturbed.

Within the walls a house situated at (A) (Pl. XL) has been excavated and partly rebuilt (Pl. LI, 1). As it stands at a low level sheltered from the wind, three of the vaults were visible above the sand before clearing began.²

¹ *Survey of Western Palestine, Memoirs*, I. 295.

² Referred to as (B) in *Survey of Western Palestine, Memoirs*, I. 294.

In the plan (Fig. 22) two periods of building have been distinguished, the later chiefly internal alterations to the earlier. The original plan was probably a rectangle with a long room along the south, entered at the east and divided into three compartments (1-3); from (1) it was connected by a square court or room covering (6, 7, 8) with a large hall (5), the west side of which may at first have been open. This hall (5) was originally roofed with an intersecting vault of cut-stone in level courses, being the intersection of two pointed cradle vaults of the same height, for the groins appear to have been semi-circular and the panel arches an exact projection of them (Fig. 24). It has a parallel on a larger scale in the vault of the gate-tower at the south-east corner of the castle. Subsequently it was replaced by a somewhat steeper cradle vault running east-west, the pressure of which was too much for the outer walls; the room was full of heavy white limestone slabs ($40 \times 30 \times 10$ cm.) from the fallen vault. The long southern room may also have originally been roofed with intersecting vaults, since it was divided into four square bays; their height is given by the extrados of the arch between the second and third, calculated from the remaining voussoirs. It required no great alterations to convert this building into hot-air baths of the hypocaust type which has been familiar in this country since Hellenistic or Roman times. The new entrance was at (6); the hall (5) became the common undressing room, the long south room (1, 2, 3) the hypocaust. It is likely that (6) was built as a vestibule during these alterations, reserving (7) as a corridor connecting the hall with the hypocaust, and (8) as a spare room; the pointed cradle vault over (7) was partly masked where it abutted against the arch of (5). The hall (5) was provided with a cold-water basin in the middle of the floor and a wide plastered bench or diwan round three sides level with the bench, two courses high, which had formerly filled the recesses between the piers of the intersecting vault. The furnace was placed in (3), so that (2) became the inner or hot room, (1) the outer or cool room. The pavement was raised on upright stones joined by stone transoms; a moulded keystone from a pointed arch (Fig. 25) was used as one of these supports. For greater comfort the floor of the hot-room (2) was finished with scraps of marble, laid in lime. Earthenware vents (Pl. LI, 2) placed at the far corners of (2) and (1) forced a draught from the furnace (3). The stoke-hole was in (3, a) (Fig. 23), covered by a rough intersecting vault, making a mezzanine floor (3'), while the fireplace (3) was probably covered with a copper tank let in between two brick arches. Hot water from this tank ran round the walls of the sweating-rooms in one of two lines of earthenware piping (Pl. LI, 3), half a metre above the floor; the other line supplied cold water. One branch followed the south side to the farthest

corner of (1); the other the north to the second wall-arch, where it seems to have passed through the wall into (5) and (7). Both branches rather inconveniently followed wall recesses which had been blocked up to the level of the hypocaust floor. Quantities of flat brick (about $22 \times 15 \times 3.5$ cm.) were found in both (1) and (2), often adhering in masses which showed that they

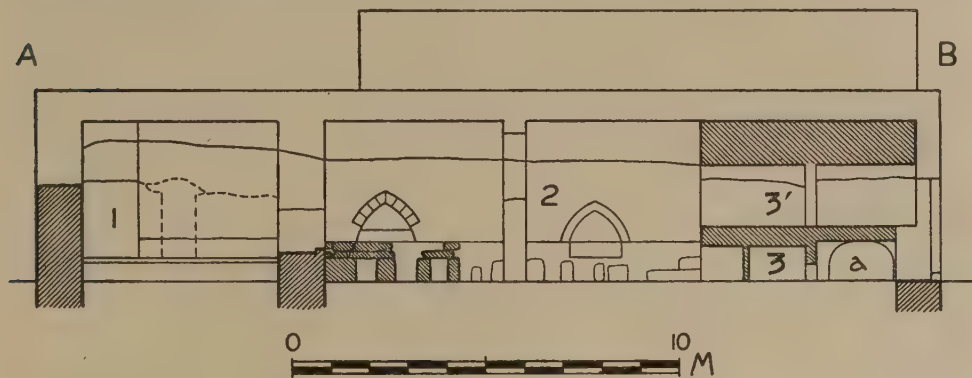


FIG. 23

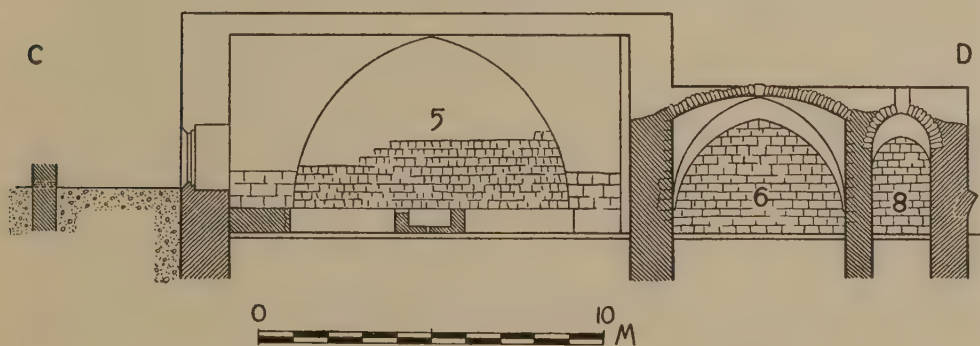


FIG. 24

belonged to a vault occasionally pierced with earthenware drain-pipes (of 4-8 cm. diameter) for lighting. A handy water-supply ruled the choice of this building as baths: a covered conduit, coming from some higher source which has not yet been ascertained, runs outside the west side, having an open basin and a branch under (10) which may have filled a reservoir in (8), a room where no paving was found. Between this conduit and the house was a room with a light timber roof resting on arches which were carelessly inserted into the wall of the original building. It contained two domed ovens, one of cut-stone (Fig. 26), the other of flat brick (Fig. 27). Adjoining this

annexe in (9) (Fig. 22) was a rotatory mill of basalt. This can hardly have been a pottery: there was no trace of a false floor in the ovens, nor were any 'wasters' found. Probably it was the local bakehouse, sharing the heat and fuel supply of the baths.

The repair of the intersecting vault in (6) (Fig. 24) disclosed an interesting survival of medieval masons' practice. A mason from a neighbouring village, et-Tira, was employed to complete a corner of the room which had broken away with the collapse of the heavy cradle vault over (5). He at once recognized the vault as *tirs*, which is nothing other than the Arabic use of the French *tiers*, applied to the setting out of the vault rather than the arches. To trace

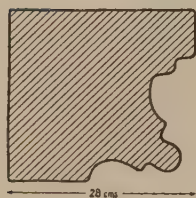


FIG. 25

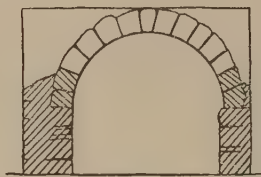


FIG. 26



FIG. 27

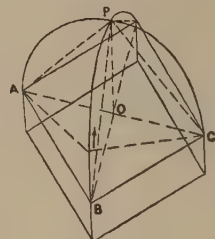


FIG. 28

the missing groin he stretched a string along the two sides AB, BC of the room containing the break, on a level with the springing, and fixed the ends at opposite corners A, c (Fig. 28). By swinging the centre B upwards to P, the point where the groins intersect, he found the semicircle of the groin, P being the *tiers-point* or apex of raking equilateral triangles PAB, &c. By trial he judged that the wall-arches were in this case of the form known as a 'fifth' (*khums*), because struck from two centres one-fifth of the span apart. This is the basic principle of the local 'cross' vault (*'aqd ṣalīb*) wherever reinforced concrete has not penetrated; it is as simple to set out over rectangular compartments as over square ones, because the groins are always semicircles, their final height being determined by the springing. Unless connecting adjoining bays, wall arches can be of any height or curve, even semicircular; almost always they are a good deal lower than the crown. The reason for this is a practical one; because long straight timber was usually scarce it was easier to put up a centring chiefly of short pieces, as shown in a recent example (Pl. LII, 1), than large cradles such as the intersecting vault in (5) required. In the case illustrated the radiating timbers were covered with a web of brushwood, and then earth and grass, mud cakes being used on the shoulders where dry earth would not adhere (Pl. LII, 2); the whole was then coated with a mud crust and powdered with dry lime, and on this cushion a vault of roughly



THE CASTLE AND FAUBOURG FROM THE AIR

(Royal Air Force Official: Crown Copyright Reserved)



FIG. 1. SOUTH-EASTERN APPROACH, SHOWING WHEEL-RUTS



FIG. 2. THE CORNER FORT (L) FROM THE SOUTH-EAST



FIG. 1. THE CORNER FORT (L) FROM THE WEST



FIG. 2. A ROCK-CUT ROOM (L: Fig. 1, 1), LOOKING EAST TOWARDS THE TOWN WALL



FIG. 1. THE TOWER (L: Fig. 1, 15), WEST FACE



FIG. 2. INSIDE THE TOWER, LOOKING WEST TOWARDS SLEEPING BENCH



FIG. 1. ARROW-SLIT IN SOUTH FACE OF
TOWER



FIG. 2. DRAIN AGAINST
EAST WALL OF TOWER

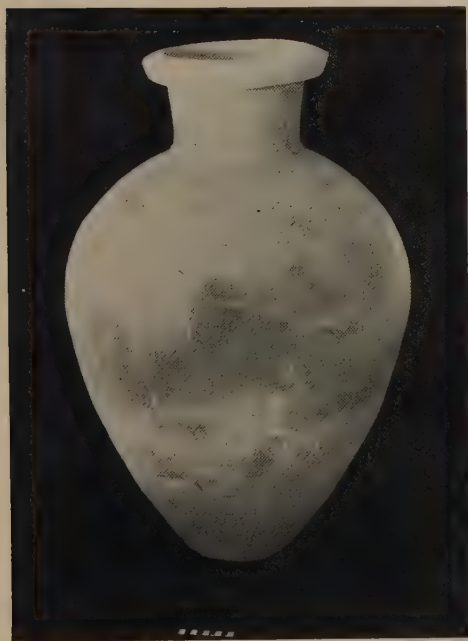


FIG. 3

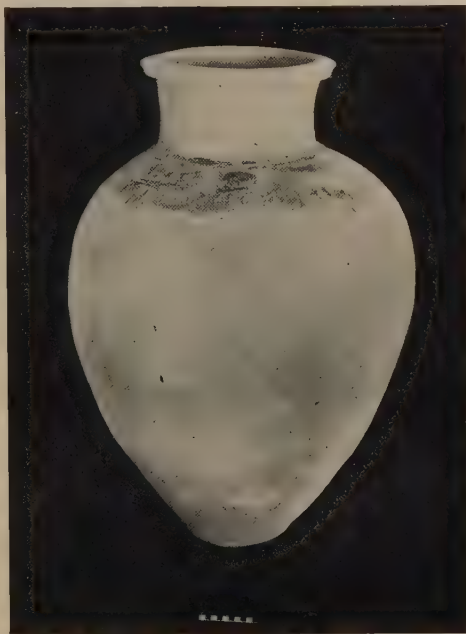


FIG. 4

WATER-JARS FROM GUARD-ROOM AT MIDDLE GATE (E)

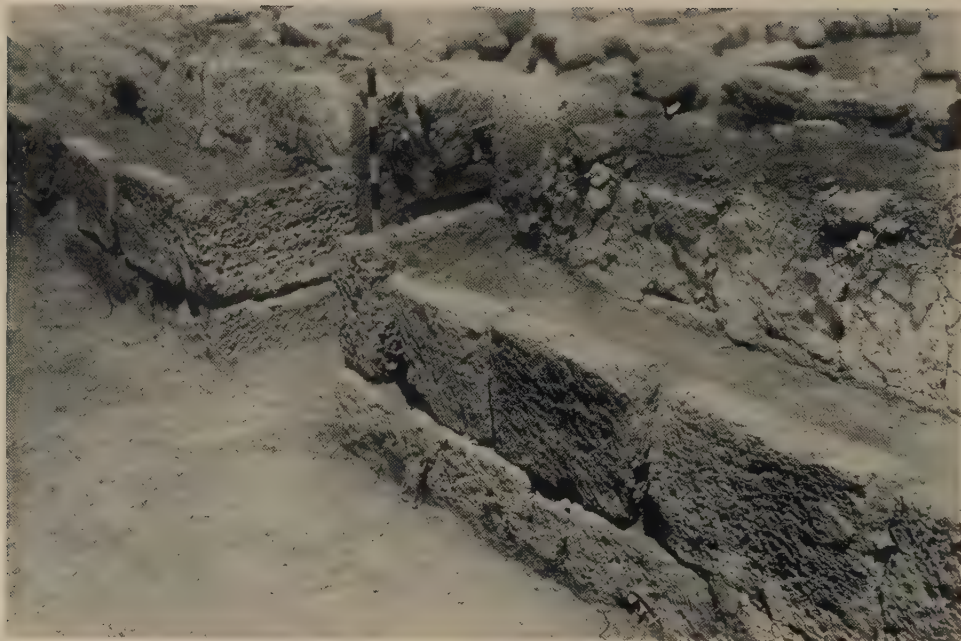


FIG. 1. MANGERS IN THE STABLES (L: Fig. 1, 19)



FIG. 2. CORBEL FROM (I.) (Fig. 1, 24) 85 CM. LONG



FIG. 3. SEAL: MATRIX



FIG. 4. IMPRESSION



FIG. 5



FIG. 1. THE TOWN WALL (B, B), LOOKING NORTH FROM THE SOUTH-EAST CORNER



FIG. 2. THE TOWN WALL (B, B), LOOKING WEST FROM
THE SOUTH-EAST CORNER

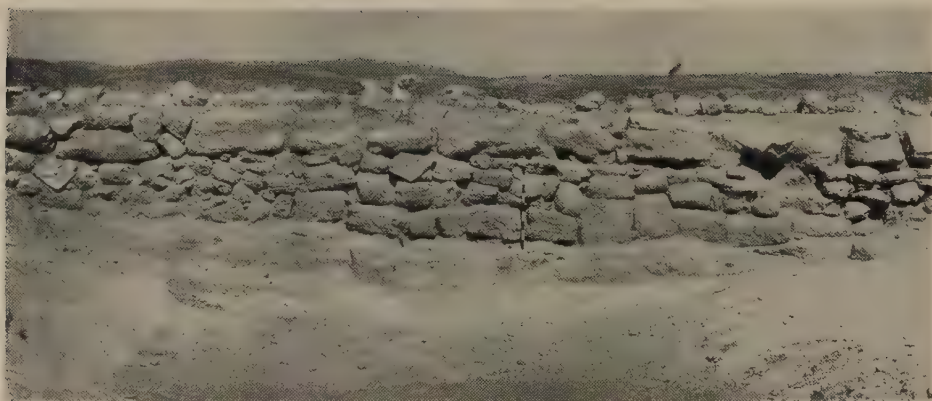


FIG. 1. THE RETAINING WALL OF THE COUNTERSCARP, OPPOSITE (H)



FIG. 2. THE TOWN WALL, SOUTH OF (H)



FIG. 1. THE NORTH GATE (C) FROM THE WEST



FIG. 2. THE CENTRE GATE (E), LOOKING WEST



FIG. 1. THE SOUTH-EAST GATE (H), LOOKING WEST



FIG. 2. THE SOUTH GATE (M), LOOKING NORTH



FIG. 1. THE NORTH SEA-TOWER (F), LOOKING WEST TOWARDS THE CASTLE



FIG. 2. THE NORTH SEA-TOWER, AS SEEN TO NORTH FROM (D)



FIG. 1. THE RECONSTRUCTED BATHS (A) FROM THE NORTH



FIG. 2. VENT IN (A) (Fig. 22, 1)



FIG. 3. ANGLE OF DOUBLE PIPING IN (A) (Fig. 22, 1)



FIG. 1
The centring from below, looking towards one of the haunches of the vault (pp. 128-9)



FIG. 2
Moulding the intrados in mud over earth and grass laid on a web of brushwood



FIG. 3
The back of the finished vault, with one of the haunches in front

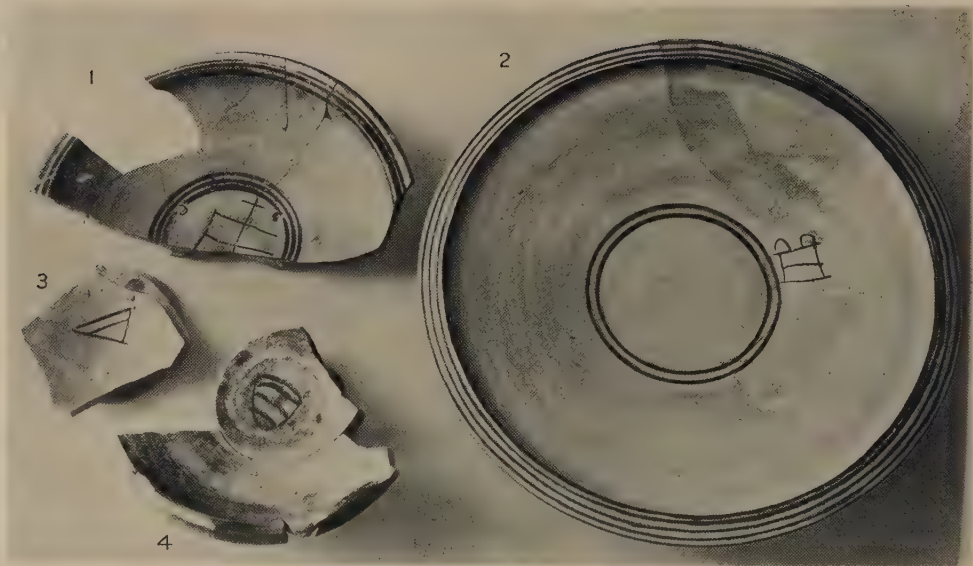


FIG. 1

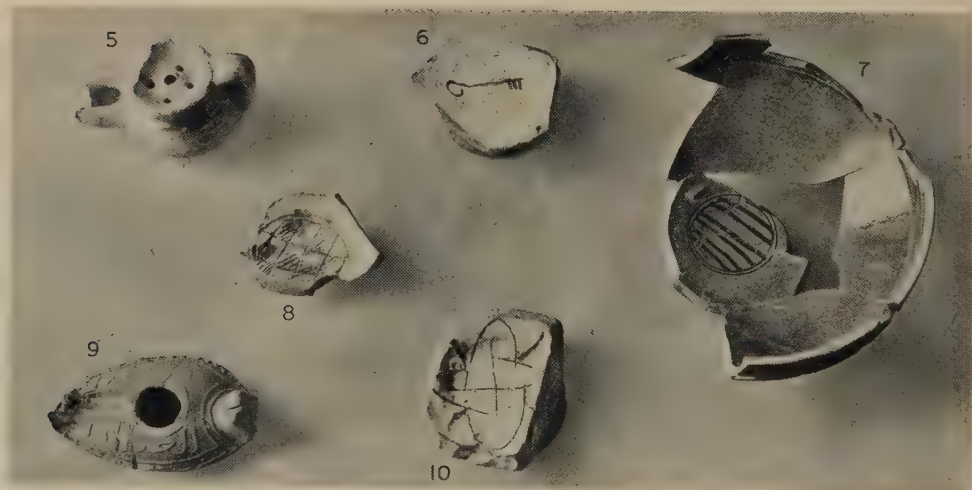


FIG. 2

GLAZED SLIP-WARE FROM THE BATHS (A)

tapered field stones was laid (Pl. LII, 3). The broken vault in (6) was repaired in the same way, following a tradition at least as old as the Crusades. This maintains unchanged the Romanesque vault on semicircular groins (*à plein cintre*), simple, uniform but ponderous, which in Europe gave way to the ribbed Gothic vault (*croisée d'ogive*).¹ Is it possible that the lighter ribbed vault, adaptable to compartments of any given height or plan, was evolved by translating into stone the main features of a timber centring such as is shown in Pl. LII, 1; and notably the series of timbers that, together with the superimposed brushwood and mud, supported the line of intersection in such a centring, and roughly traced the line of the curve more precisely rendered by a stone rib?

Consequently while the first vault of (5) may be attributed, together with the shell of the building, to the Crusader town of the thirteenth century, the new work including (6) may be Crusading or may be later. The objects found in the filling of the rooms were a mixture of both periods, Crusader and Mamluk. The coins were chiefly of the first occupation, a *gros tournois* of Philip III for instance on the floor of (1) and Ayyubid coins elsewhere. But among a great many fragments of slip-ware with *sgraffito* designs under an iron-brown or yellow glaze were some with distinctive

العبد لله

الإقبال

Eternal luck

Happiness to its proprietor

FIG. 29

marks or blazons of both occupations (Pl. LIII); of these, (1-4) seem to be Crusader; (6-8), Mamluk; with possibly (10), which has the interlacing rings common on Sassanian ware (cf. also Fig. 20). One lamp (5) with an emerald glaze is of a type found at the Teutonic castle of Montfort in Galilee (*Qal'at el Qurain*), also of the thirteenth century; the other (9), a surface find, can hardly be earlier than the Mamluk conquest, judging from the letter forms (Fig. 29). Evidently the house was still in use under the Mamluk occupation of the fourteenth and fifteenth centuries, when the castle became the centre of a district ('*amal*').² If so, was it the Mamluk garrison that converted it into baths? The fact that a Gothic keystone (Fig. 25) was re-used in making the hypocaust points directly to Mamluk effort. Indeed baths agreed better with Egyptian than with Frankish habits. Some of the country-born Latins of the third and fourth generations may have come to prize the pleasures of Syrian baths; but to Usāma b. Munqidh, the contemporary of Saladin, the behaviour of the Franks when confronted with such an unaccustomed novelty seemed naïve and odd, a subject for amusing anecdote.³

C. N. J.

¹ Viollet-le-Duc, op. cit., IV. 19.

² *Subh al-A'shā*, IV. 152.

³ *Kitāb al-I'tibār*, ed. Hitti, p. 136 f.; trans. (Princeton, 1930), p. 165.

COINS IN THE PALESTINE MUSEUM. II

(*Local varieties, continued from Vol. I, No. 2, pp. 70-3.*)

Ascalon.

Æ. ¹ Head of HERACLES (?) r.
16 mm. ↑ * Rv. Prow of galley l.;
3.88 gm. above: A C
* (232.2) * db. Pl. LIV, No. 1.

Æ. ¹ Head r., as on preceding;
19 mm. db.
4.92 gm. ↑ Rv. Prow l.;
(232.3) above: A C below: O M
db.
(Year 49 of Ascalon = 56-55 B.C.)² Pl. LIV, No. 2.

Æ. ³ Head of POSEIDON (?) r.
23 mm. ↑ Rv. Eagle standing l.; palm-branch in field r.; across field (l. and r.):
13.57 gm. A Σ O M Pl. LIV, No. 3.
(233.1) (Year 49 = 56-55 B.C.)²

Æ. ⁴ Head of AUGUSTUS r.; in field, l. and r.:
23 mm. C E
12.02 gm. db.
(237.1) ↑ Rv. Female figure, wearing (? turreted crown—off flan,) long gown and
mantle, standing l. on galley, holding in l. hand aphlaston and in r.
sceptre; in field l., a dove and: A C
in field r.: ZIP
db.
(Year 117 = A.D. 13-14.) Pl. LIV, No. 4.

* In addition to conventional abbreviations the following are used:

Rv. = reverse. db. = dotted border.

L. = bust laureate. LPC. = bust laureate, wearing paludamentum and cuirass.

Numbers in brackets in the left-hand column are the serial numbers of the coins in the Palestine Museum.

¹ Cf. *British Museum Catalogue, Palestine*, p. 109, No. 31, &c.

² From their fabric these coins could be much later; the possibility of a second era is mentioned, *ibid.* p. xlix, n. ³ *Ibid.*, p. 106, No. 16, similar. ⁴ *Ibid.*, p. 114, No. 72, similar.

Æ. MARCUS AURELIUS r. * L., with drapery round neck; from r.:
 26 mm. ANTΩNINO C C ΕΒΑΚΤΟC
 17.09 grm. db.
 (261.1) ↑ Rv. Poseidon, with chlamys on shoulders and blown back by the wind,
 standing l., bending forward, resting r. elbow on r. knee (raised) with
 foot placed on a rock, holding in r. hand dolphin and in l. trident; from l.:
 ΑΚΚΑΛΩΝ ΒΠC
 db. Pl. LIV, No. 5.
 (Year 282 = A.D. 178/9.)

Æ. MACRINUS r. * LPC.; from l.:
 30 mm. •Κ•Μ•ΟΠ•CΕ•ΜΑ - -
 24.27 grm. db.
 (267.1) ↑ ¹ Rv. Heracles, unclothed, walking l., carrying in r. hand Nike r.
 extending a wreath, and in l. club held upwards; from l.:
 ΑΚΚΑΛΩ [•] ΚΤ
 db. Pl. LIV, No. 6.
 (C. A.D. 218.)

Æ. SEVERUS ALEXANDER r. LPC.; from r.: ΑΛ[Ε]ΞΑΝ ΔΡΟC
 13 mm. db.
 1.86 grm. ↓ Rv. Sol, radiate, unclothed, standing to front, looking l., with r. hand
 (274.1) raised² and flail held in l.; from l.: ΑΚΚΑΛ Ω•ΗΚΤ
 db. Pl. LIV, No. 7.
 (Year 328 = A.D. 224/5.)

Eleutheropolis.

Æ. ³ Bust of JULIA DOMNA r., draped; from l.: - - ΔΟΜ ΝΑ - -
 20 mm. db.
 7.46 grm. ↑ Rv. Nike, moving l., with wreath extended in r. hand; from l.:
 (286.1) Α•CΕΠC - - ΕΛΕΥΘΕΡ
 db. Pl. LIV, No. 8.

* See abbreviations (n. on preceding page).

¹ Cf. type of Elagabalus, *B.M.C.*, p. 138, No. 244.

² What appears to be a small cone or pyramid-shaped object held in the r. hand may be only a clumsy outline of the fingers.

³ de Saulcy, *Num. de la Terre Sainte*, Pl. XII, No. 5.

Gaza.

- Æ. ¹ Bust of GETA r. wearing paludamentum and cuirass: from l.:
 24 mm. - - CCEΠTIMIOCT[Ε]TAC - -
 12.45 grm. db.
 (348.1) ↑ ²Rv. Temple, showing two columns, containing figures of Artemis, with
 bow and quiver, and Marnas; in centre: Π¹
 in field, l. and r.: Ζ C
 in ex.: ΓΑΖΑ
 db.
 (Year 260 of Gaza = A.D. 199-200.)

Pl. LIV, No. 9.

Raphia.

- Æ. COMMODUS r., LPC.; from l.:
 28 mm. ΑΥΤΑΥ ΠΗΚΟΜΟΔΟC
 17.26 grm. db.
 (361.1) ↑ ²Rv. Roma (?) helmeted, seated l., holding in l. hand spear and extending
 r. towards small nude male figure (? Marnas) standing to front, looking
 l.; on r., small figure of Artemis standing l. with bow and quiver;
 on l.: ΠΑΦΙΑ on r.: [Θ] ΛC
 db.
 (Year 239 of Raphia = A.D. 179-180.)

Pl. LIV, No. 10.

- Æ. SEPTIMIUS SEVERUS r., LPC.; from l.:
 25 mm. - - Λ•CΕΠ•CΕ ΟΥΗΡΟC•Π•[CΕB]
 16.49 grm. db.
 (363(1).1) ³ Rv. City-goddess, wearing turreted crown, long robe and mantle,
 standing l., holding in l. hand cornucopiae and in r. infant Dionysos
 seated l., holding bunch of grapes;
 on r.: ΠΑΦΙΑ on l.: ΑΞC
 db.
 (Year 261 = A.D. 201/2.)

Pl. LIV, No. 11.

- Æ. SEVERUS ALEXANDER r., LPC.; from l.:
 23 mm. [ΑΥΤΚΑΙΜΑCΕΑ]ΛΕ[Ξ]ΑΝΔ[P] - -
 11.5 grm. db.
 (368(1).1)

¹ B.M.C., p. 166, No. 137, similar.

² B.M.C., p. 171, No. 2, similar.

³ Ibid., p. 171, No. 1 (on a coin of Commodus).

↑¹ *Rv.* Dionysos, with chlamys on shoulders, standing l., resting l. hand on thyrsos and holding cista (?) in r.; in field l., panther seated l., looking up;

on l.: 4CIC7A on r.: - A9IA

db.

Pl. LIV, No. 12.

(Year 290=A.D. 230/1.)

Caesarea (Samaria).

Æ.

² SEPTIMIUS SEVERUS r., LPC.; from centre, on r.:

28 mm.

-- SARMA -- [PTSEVERVSP ERTA] -

16.74 gm.

db.

(453.1)

↑ *Rv.* Founder, in toga, ploughing r. with ox and cow; above, Nike flying l. with wreath extended in r. hand;

above: COLPRFL in ex.: CAESARE -
AVC[PC]

db.

Pl. LIV, No. 13.

Æ.

³ SEVERUS ALEXANDER r., L.; from l.:

27 mm.

IMCSEV[ER] --

11.73 gm.

db.

(463.1)

↓ *Rv.* Eagle with wings spread, supporting wreath inscribed [SPQR]; from l.: CIFAV CAES

in ex.: METRO

db.

Pl. LV, No. 14.

Diospolis-Lydda.

Æ.

⁴ Bust of CARACALLA r., radiate, wearing paludamentum and cuirass; from l.:

26 mm.

AVIKMAV ANI[WNEINO]

11.42 gm.

db.

(517.1)

↓ *Rv.* Temple, showing four columns with Corinthian capitals and Attic bases, supporting barrel-vault represented by two dotted lines with a continuous undulating line between; in centre, goddess wearing turreted crown and veil flying out behind,⁵ short tunic and cuirass (?), standing l. with spear in l. hand, wreath (?) in r.;

on l.: -- CEO on r.: ΔIOCT

in ex.: EIO⁶

db.

Pl. LV, No. 15.

(Year 9=A.D. 207/8.)

¹ Ibid., p. 171, No. 3 (on a coin of Septimius Severus).

³ Ibid., p. 27, No. 118, similar.

⁵ What looks like a veil flying out behind may be Nike flying l. extending wreath (imperfectly struck).

² Ibid., p. 19, No. 54, &c.

⁴ Ibid., p. 43, No. 3, similar.

⁶ For ETO.

Æ. ¹ CARACALLA r., LPC.; from l.:
 24 mm. [AVTKAI] MA•A[N] - -
 12.92 grm. db.
 (519.1) ↑ Rv. Draped bust of City-goddess l., wearing turreted crown; in field l.: ε
 from l.: ΑΣΕΠΣΕΟ ΔΙΟΠΟ
 db. Pl. LV, No. 16.

Ptolemais-Ace.

Æ. VALERIAN l., LPC.; from l.:
 25 mm. IMPGE[LIC VA]LERIANVSAV
 13.08 grm. db.
 (1053(1).1) ² Rv. Zeus Heliopolites, wearing kalathos, standing to front holding
 flail (?) in r. hand, with ears of corn in l.; below, on either side, fore-
 parts of two bulls; from l.: COLP TO L
 db. Pl. LV, No. 17.

Æ. ³ VALERIAN r., LPC.; from l.:
 27 mm. - - - LERIANVSAVG
 12.05 grm. db.
 (1053(2).1) ↑ Rv. Fig-tree between two low altars from which rise serpents; caduceus
 in field r.; from l.: COL P T OL [-]
 db. Pl. LV, No. 18.

Nysa-Scythopolis.

Æ. CARACALLA r., LPC.; from l.:
 30 mm. AV[TK]MA ANTU •CEB
 13.42 grm. db.
 (656.1) ↑ Rv. Zeus, with himation over lower limbs, on l. shoulder and flying out
 behind, seated l. on high-backed throne, holding in l. hand sceptre and
 in r. Nike r. extending a wreath; from l.:
 NVC•CK[V] ΘΟΠ •ΙΕΡ•Α•CVA
 in ex.: OC (reading outwards).⁴
 db. Pl. LV, No. 19.

Sebaste.

Æ. CARACALLA r., LPC.; from l.:
 22 mm. [IMPCM]AVR ANTONI AVG
 7.76 grm. db.
 (644.1)

¹ de Saulcy, Pl. IX, No. 2.

² Cf. Rv. types of Neapolis, Palestine, *B.M.C.*, p. 49, No. 27, &c.

³ Babelon, *Les Perses Achéménides*, p. 227, No. 1558.

⁴ Probably intended to conclude the inscription and not to be read as a date.

↖¹ *Rv.* Sphinx, with spiked head-dress, seated l., looking to front, r. forepaw raised over wheel, wing terminating in human head l. radiate; above: COL L SEP in ex.: SEBASTE
db. Pl. LV, No. 20.

Dora.

Æ. Draped bust of JULIA DOMNA r.; from l.:
23 mm. IOY•ΔO MNACEB
10.55 gm. db.
(987.1) ↑ *Rv.* Draped bust of City-goddess r., wearing turreted crown and veil; in field r., prow of galley r.; from l.:
ΔΩΡ•N AY•EIC
db. Pl. LV, No. 21.
(Year 265, Pompeian era=A.D. 201/2.)

Bostra.

Æ. PHILIP SENIOR r., LPC.; from l.:
31 mm. [IMCA] - - L - - PPOS AVG (*sic*)
17.69 gm. db.
(1542.1) ↖² *Rv.* Bust of Sarapis r., wearing kalathos and taenia, drapery round shoulders, star on chest; from l.:
COLMETRO POLISBOSTRA
db. Pl. LV, No. 22.

Æ. As preceding:
27 mm. IMCASMIVL PHILIPPOS AVG (*sic*)
17.39 gm. ↓ *Rv.* As preceding:
(1542.2) [COLMETRO] POLISBOSTRA Pl. LV, No. 23.

Æ. PHILIP SENIOR r., LPC.; from l.:
27 mm. IMCASMIVL PHILIPPVS[AVG]
16.25 gm. db.
(1541.1) ↘³ *Rv.* Male bust r., wearing taenia, drapery over shoulders and star on chest; from l.:
COLMETROPOLISBOSTRA
db. Pl. LVI, No. 24.

¹ *B.M.C.*, p. 81, No. 19, similar.

² Or bust of Zeus-Ammon? See discussion on Dussaud's identification of Dusares with Zeus-Ammon, *B.M.C., Arabia*, pp. xxvi ff., also *Rev. Num.*, 1911, pp. 69 ff.

³ The god here represented (Dusares?) seems identical with the Sarapis or Zeus-Ammon on the preceding coin except that he does not wear the kalathos; this may lend support to Dussaud's identification, which is questioned in the references quoted. Cf. *Rv.* type, *B.M.C., Arabia*, p. 23, No. 39.

Damascus.

Æ. Draped bust of OTACILIA SEVERA r., hair rolled, ending in plaits turned up
29 mm. on back of head and secured at the top by stephane; horns of crescent
15.53 grm. showing on either side of bust; from l.:
(2383.1) MOTACSEVERAAVG

db.

↖¹ Rv. Goddess, wearing turreted crown and long robe in folds over lower limbs, reclining l. in tunnel (aqueduct) over stream issuing r. out of small cubical block from which rise three short vertical lines (? flaming altar); she holds in r. hand (extended) a bunch of corn and in l. cornucopiae; above, a temple showing four columns, pediment containing sun-disk, podium resting on top of tunnel; in the temple, Marsyas walking l. with water-skin; in field l., a star; r., a crescent; from l.:

COLDAM ASMETRO

in ex.: ΠΗΓΑΙ

db.

Pl. LVI, No. 25.

Æ. PHILIP SENIOR and PHILIP JUNIOR, busts confronted, the former r. laureate, the latter l. radiate, each wearing paludamentum and cuirass;
30 mm. from l.:
16.07 grm. (2386.1) - - ILIPPVSAV

in ex. (reading outwards): GG

db.

↖ Rv. Heracles, nude, standing to front, looking l., holding over extended r. arm lion-skin and leaning with l. hand on club; in field r., palm-branch;² from l.: COLDA - - ETRO

db.

Pl. LVI, No. 26.

Æ. PHILIP SENIOR r., LPC.; from l.:
28 mm. IMPM - - -

15.43 grm. db.

(2386(1).1) ↖³ Rv. Goddess, wearing turreted crown, in long robe hanging from shoulders, leaving body uncovered but wrapped in folds over lower limbs, reclining l. above stream in which river-god Chrysoroas swims r.; she holds two ears of corn in r. hand and (? cornucopiae) in l.; from l.:

COL·DAM - -

in ex.: XPYCO - -

db.

Pl. LVI, No. 27.

¹ Imhoof-Blumer, *Nymphen und Chariten*, *Journ. Internat. d'Arch. Numismatique*, Tome 11 (1908), p. 170; also Head, *Historia Numorum* (1911), p. 784.

² Type much worn; perhaps holding in l. hand club (downwards) and palm-branch.

³ Cf. type of Trebonianus Gallus, *B.M.C., Galatia*, p. 287, No. 28.

Gadara.

Æ. NERO r., L.; from r.:
 21 mm. [N]EPΩNKAI CAP
 9.94 gm. db.
 (2490.1) ↑ Rv. City-goddess, wearing turreted crown, long gown and mantle, standing l., extending wreath in r. hand, holding (? cornucopiae) in l.; in field l., palm-branch; also:
 ΛΑΡ from r.: [Γ] ΑΔΑΡΑ
 db. Pl. LVI, No. 28.
 (Year 131, Pompeian era = A.D. 67-68.)

Æ. SEPTIMIUS SEVERUS r., L.; from r.:
 34 mm. AYT - -
 21.25 gm. db.
 (2498.1) ↑ Rv. Galley l. with oars and rudder, heads of rowers showing above deck and nude male figure seated l. at stern; above:
 [ΠΟ - -]
 ΗΙΕΩΝ
 [Γ]ΑΔ[ΑΡ]ΕΩ
 ΕΤ - ΖC
 db. Pl. LVI, No. 29.
 (Between A.D. 197 and 206.)

Æ. CARACALLA (? or Elagabalus) r., LPC.; from l.:
 34 mm. AVKMA[V] - - ANTW - -
 18.72 gm. db.
 (2499.1) ↗ Rv. Similar to preceding; amphora at prow; in ex., two dolphins;
 ΠΟΜΠ -
 ΓΑΔ[Α]ΡΕΩ -
 Pl. LVI, No. 30.

Æ. GORDIAN III r., LPC.; from l.
 26 mm. [IM] - - ΟΡΔΙΑ - -
 14.97 gm. db.
 (2501.1) ↗ Rv. Galley r., with oars, heads of rowers, and male figure seated r. at stern; over prow, standard (? or lamp hung on a pole); above:
 - ΟΜΠ
 [Γ]ΑΔΑΡΕ
 WN
 db. Pl. LVI, No. 31.

¹ Cf. de Saulcy, p. 302 and Pl. XV.

Philadelphia.

Æ. ¹ Female bust l., veiled and draped; from l.:
18 mm. ΦΙΛΑΔΕΛΦΕ - -
5.82 grm. db.
(1607.1) ↑ *Rv.* Five ears of corn on stems bound below with a leaf on either side;
around: - - [M C]
db. Pl. LVI, No. 32.

Æ. LUCIUS VERUS r., LPC.; from l.:
25 mm. ΑΥΤ•ΚΑΙC•Α ΑΥΡ•ΟΥΗΡΟC
14.45 grm. db.
(1625.1) ↑ ² *Rv.* Veiled and draped bust of the goddess Asteria r., with star above
her head; from l.:
ΦΙΛ•ΚΟΙ•[C]ΥΡΙ ΘΕΑΑCΤ[Ε]ΡΙΑ
db. Pl. LVI, No. 33.
C. L.

¹ Asteria?

² Cf. type of Marcus Aurelius, *B.M.C., Arabia*, p. 39, No. 12.



COINS IN THE PALESTINE MUSEUM. II



COINS IN THE PALESTINE MUSEUM. II



COINS IN THE PALESTINE MUSEUM. II

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See Tall el Hasi.

¹ Continued from No. 2, pp. 86-94.

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